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November 6, 2008

Robert L. Pettit
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Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Ex Parte Presentation
IB Docket No. 95-91
WT Docket No. 07-293

Dear Ms. Dortch:

On November 5, representatives of Sirius XM Radio, Inc. ("Sirius XM") met with the staff of the Office of Engineering and Technology (OET) to discuss issues associated with the above-captioned proceedings.

Attending the meeting on behalf of Sirius XM were myself, Michael Lewis (Engineering Consultant) and Carl Frank from Wiley Rein, LLP and James Blitz, Alan Pate, Terry Smith, Craig Wadin, and Gary Parsons of Sirius XM. Attending on behalf of OET were Julius Knapp, Ron Repasi, Patrick Forster, Robert Weller, Saurbh Chhabra, Ahmed Lahjonji, and Ted Ryder.

The attached presentation, along with pleadings previously filed by Sirius XM, formed the basis of our discussions. Please contact me if there are any questions on this filing.

Sincerely,

/s/ Robert L. Pettit
Robert L. Pettit
Counsel to Sirius XM Radio, Inc.

cc: Julius Knapp
Ron Repasi
Patrick Forster
Robert Weller

Saurbh Chhabra
Ahmed Lahjonji
Ted Ryder

Satellite Radio and WCS Coexistence

IB Docket No. 95-91
WT Docket No. 07-293

Sirius XM Radio, Inc.
November 5, 2008

Progress Toward Resolution

Terrestrial Repeater Rules are Ready to Be Finalized

- Last month, Sirius XM recommended that the Commission resolve the long standing proceeding to establish final rules for satellite radio terrestrial repeaters. Sirius XM noted that there is no technical basis to further delay adopting final licensing rules for terrestrial repeaters:
 - Interference potential to fixed WCS based station repeaters is minimal and can be mitigated with proper site planning.
 - WCS receivers would have a minimum 4 MHz guard band from terrestrial repeater transmitters and as much as a 9-14 MHz guard band.
 - Potential interference to WCS mobile units would be minimized by the low number and high elevation of satellite radio terrestrial repeaters in any given market.

Progress Toward Resolution

Service to Existing Consumers Must be Protected

- At the same time, Sirius XM recommended against adopting technical rules for WCS mobile operation that would have the potential to block service to millions of satellite radio listeners.
 - Sirius XM showed that satellite radio has minimal signal margin available (approximately 6 dB) to overcome WCS interference.
 - Sirius XM provided analyses predicting a 13% probability of interference to satellite radio during the early stages of WCS mobile deployment. This probability would rise to 24% as WCS deployment increases.
 - As the Commission reviews proposals that would allow WCS mobile devices, it should protect adjacent band services in a manner that is consistent with proposals being considered in similar proceedings (AWS-3, H-Block).

Progress Toward Resolution

Updated Analysis – AWS-3 Technical Report

- The FCC's recently released technical analysis on AWS-3 interference into AWS-1 receivers produces results consistent with Sirius XM's technical recommendations when appropriate corrections for service differences are considered.
- OET calculated AWS-3 out-of-band emission limits and transmitter output power necessary to limit interference AWS-1 mobile receivers using:
 - Static test data on the interference immunity of AWS-1 receivers;
 - Free space path loss assuming 2 meter separation between devices;
 - Additional path loss correction factors such as head and body losses, antenna coupling losses, multipath and fading losses;
 - Victim receiver spreading (CDMA) gain.
- OET used probability analysis to qualitatively illustrate that proposed values were conservative.
 - Consistent with Sirius XM's position that probability analysis is only one element that must be considered along with basic interference mechanisms and should not be solely used to apply large discounts to fundamental measurements.

Progress Toward Resolution

Updated Analysis – AWS-3 Technical Report

- Key differences must be recognized when applying the OET analysis to the WCS and Satellite Radio environment:
 - Satellite Radio operates with lower power than terrestrial wireless networks. OET assumed AWS-1 **desired** signal strength of -95 dBm. In 99 percent of the country, satellite radio receivers get their service from space-based satellites that provide a service level of -100 dBm on average.
 - OET assumes additional path losses and antenna coupling losses that are inapplicable to Satellite Radio such as head and body blockage (satellite radio receivers are not held to the head like a cellphone) and antenna coupling losses (minimized due to fixed external Satellite Radio antennae).
 - OET assumes a 2 meter separation distance between interfering AWS devices. Sirius XM's analysis assumes 3 meter separation.
 - Satellite radio receivers perform differently than AWS-1 handsets and will therefore mute at different levels of OOB and overload interference.

Progress Toward Resolution

Updated Analysis – AWS-3 Technical Report

- Directly inserting parameters and data that are appropriate for WCS/Satellite Radio into the equations contained in the AWS-3 technical report, the OET analysis would yield technical specifications for WCS mobile devices that are far more stringent than that proposed by the WCS Coalition.
- When used in this manner, the OET analysis validates the technical recommendations of Sirius XM.

Progress Toward Resolution

Where do we go from here?

The best opportunity for concluding this proceeding is to combine OET's recent findings in AWS-3 with the new approach that Sirius XM proposed to the Commission last month:

- Part 25
 - Complete terrestrial repeater rulemaking incorporating Sirius XM's proposals
- Part 27
 - No changes to the rules for the C and D blocks
 - Flexibility to enable WCS mobile operations in the WCS A and B blocks might be possible *provided that the rules maintain:*
 - Appropriate guard bands to satellite radio.
 - Appropriate restrictions on maximum power and out-of-band emissions limits.
 - Allow for WCS base station “burst average” power measurements as an element of a site specific joint formal interference resolution process.